

## Abstract

A database system and method for organizing data elements according to a Hilbert curve, said data elements being representable by a plurality of coordinates, said database system comprising:

5 first means for generating a plurality of bitblocks by bitwise interleaving the coordinates of the data elements;

second means for applying a fliprot transformation to a first bitblock;

10 said fliprot transformation comprising a flip transformation and a rot transformation, said flip transformation inverting bits of said bitblock, said rot transformation interchanging bits of said bitblock;

third means for obtaining, for each further bitblock, a fliprot transformation by a concatenation of two or more fliprot transformations; and

15 fourth means for applying fliprot transformations to their corresponding bitblock;

whereby the bitblock bits determine the organization of said data elements according to said Hilbert curve.